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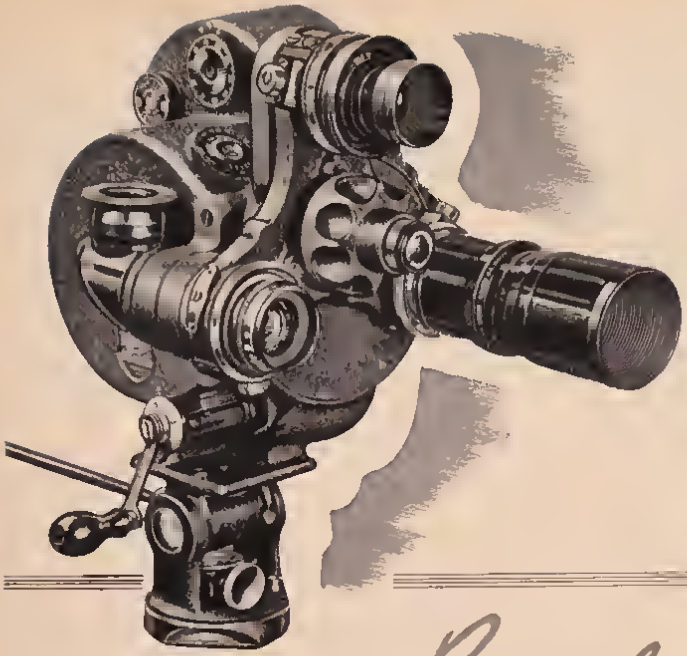

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ON THE FRONT COVER—On location at Jasper National Park, Canada Director of Photography George Barnes, A S C, and Director Billy Wilder atop an electric camera crane for an overhead shot for the Paramount production, "Emperor Waltz," starring Bing Crosby. Photo by G E Richardson

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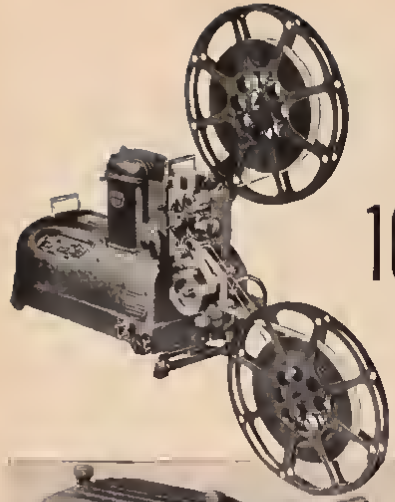

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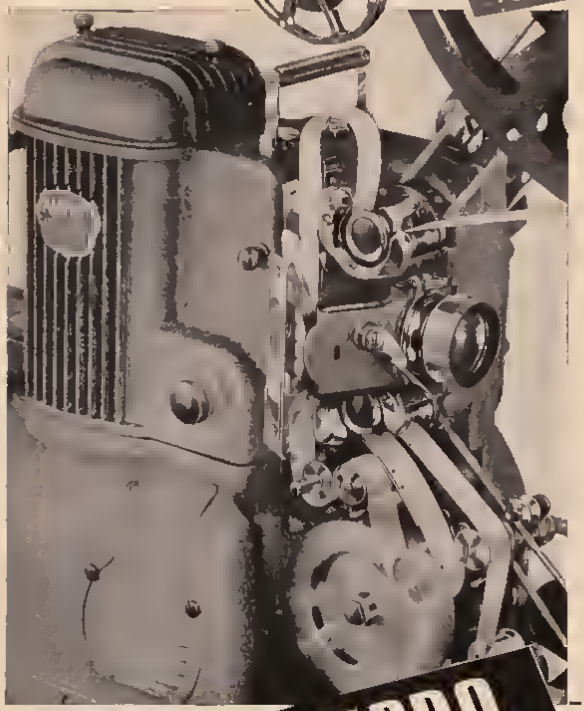

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ACES of the CAMERA

WILFRED M. CLINE, A. S. C.

By ROE FLEET

WHEN Wilfrid Cline, A. S. C., joined the Technicolor camera staff late in 1934, he had no idea that the association would project him into the most important development of motion picture photography since the inception of the industry

At the time, Technicolor had perfected a three-color method of motion picture photography, in contrast to the previous two-color systems. As a marked advance in engineering and technique, it opened new and broader fields for the men delegated with the responsibility of photographing the initial productions turned out by the tri-color process. But the challenge was successfully met by Ray Rennahan, A. S. C., veteran cinematographer on the Technicolor staff, who handled the job of Director of Photography on "La Cucuaracha," the first live-action featurette produced by the three-color Technicolor process. Will was operative cameraman on this picture, and the first Technicolor feature, "Becky Sharp," which also had Rennahan as Director of Photography

But in the middle of the latter production, he was drafted to hike out to Guatemala and Mexico to photograph a group of James Fitzpatrick Traveltalks for Metro release. During the next several years, and in between his feature assignments on Hollywood productions, Will photographed about 20 additional Technicolor reels for the producer in Japan, Hawaii, Mexico and in various parts of the United States. Group of such pictures produced in 1941 by Fitzpatrick gained him a special citation from the Mexican government

Following return from his initial trip to Mexico, Will mainly handled second units on feature productions, including "Garden of Allah," "A Star Is Born," "Robin Hood," "God's Country and the Woman," and "Nothing Sacred." for the latter, he handled the first Technicolor camera for shooting from the open cockpit of an airplane. As a result of the success achieved on this assignment, he became virtually the aerial camera expert on the Technicolor staff, handling the flying camera work on numerous productions—most outstanding of which was Paramount's "Men With Wings." On the latter, Paul Mantz and his camera-wise pilots carried Will through hair-raising dives and turns to photograph the scenes required by the sometimes too-imaginative script writers

As a result of his ability to take off for far places with film, camera equipment, and one or two assistants, and return with footage to meet the requirements of the producer, Will has traveled and flown extensively. In fact, he keeps a bag packed at home continuously for a quick pickup on dashes to the train or plane for photographic assignments in any part of the world.

This propensity for photographing pictures away from Hollywood and the conveniences of the studios, started early in Will's career as a cinematographer. He was headed for college upon graduation from high school when a summer vacation stint as assistant cameraman on several westerns so intrigued him with the art of cinematography that he decided to pass up college and study photography by practical experience. He caught on as an assistant cameraman at Universal, where the chores were mainly manual labor of lugging the camera, tripod, and other equipment over the hills and desert for the shooting of westerns and serials. In those days, the cameraman loaded his own film, and started out at seven in the morning for a 12 to 16 hour day. But Will's apprenticeship paid dividends, as he was shortly promoted to the post of second cameraman—setting up his camera beside the regular one to grind off a negative for foreign release purposes.

Later, he grasped the offered chance to take charge of the Akeley camera to add to his education in proper maneuvers of the gyro-headed instrument for running and quick pan shots which, at the time, could not be secured by the regular cameras of those days. Universal had acquired the Akeley No. 45 and No. 47 machines, which had been used by the U. S. Signal Corps in World War I; which were used mainly for location work on westerns and serials, and one highlight trip of Will's was to the Pen-

(Continued on Page 149)

Cameraman's Director

By Herb A. Lightman

TO a world of American moviegoers, Alfred Hitchcock, British-born director of hair-raising drama, is known as the "Master of Suspense"—creator of such fine film fare as "Rebecca," "Foreign Correspondent," "Shadow of a Doubt," "Spellbound," and "Notorious." But to the even more critical audience behind the camera: the technicians and grips and electricians, he is known respectfully as a *cameraman's director*.

This is no small distinction. In an industry where temperament is standard equipment and directors are portrayed as fire-breathing monsters, it is somewhat refreshing to find one who not only is the personification of calm, but is also recognized by his fellow technicians as an especially co-operative co-worker.

Ever since cinematographers stopped cranking their own cameras, isolated director-cameraman relationships have been something that Hollywood would rather not talk about, due to the fact that several notorious feuds have arisen out of what should be a sweetness and light amalgamation of talents. Very often, a domineering director with inadequate technical background will insist that the camera be handled *his* way, chewing on the backdrop if the cameraman dares to move the instrument as much as a foot either way for better composition.

There is no such hanky-panky on a Hitchcock set. "Hitch" (as his associates call him) is the kind of director who considers the camera first, and then plans his action to match. If he finds that the mechanics of the camera are limited in achieving the effect he has in mind, he will restage the action to conform to these limitations, rather than force a strained camera approach. Yet, he remains one of the industry's outstanding camera experimentalists. The reason why he so often manages to place pure cinema on the screen is that he designs the layout of each scene mainly from the standpoint of what is required for good camera presentation.

Director Alfred Hitchcock (right) discusses a camera set up with Director of Cinematography Lee Garmes, A.S.C., on the set of David O. Selznick's The Paradine Case, now in production. The operating camera men, flat on the floor in the foreground, jockeys the camera into position for a super low angle shot. Garmes' mood photography in this film is outstanding.

A Matter of Background

Hitchcock's acute sense of camera is the blended result of his early training in art and engineering. The "art" side of his education developed a keen consciousness of pictorial composition, whereas the "engineering" phase trained him to express dramatic action in terms of a mechanical medium.

His first job in the British film industry was as designer of art titles. By 1923 he was performing the triple task of art director, script writer, and assistant director. He had no particular ambition to assume directorial reins, but he was often asked to coach second units, and was finally sent to Munich to direct a film in German. He toiled away on the continent and ten weeks later returned to England with eight cans of film which he carried in his luggage sandwiched in amongst shirts and socks.

It was on this German picture that he met his future wife, Alma Reville. A pert young assistant director with a background as script girl, writer and cutter, she had entered the film industry before he did. Finding that they made beautiful movies together, Hitch proposed and thus became the only director on record to marry his assistant director. When asked if his courtship had been a whirlwind sort of affair, he responded dryly, "Well—no. It was rather like a long *lap dissolve*."

Before coming to Hollywood, Hitchcock had become the undisputed top director of the British screen. He had shocked the usually calm English audience into a state of pleasurable pins and needles with such suspense thrillers as "The 39 Steps," "The Lady Vanishes," and "Secret Agent." It was inevitable that Hollywood should beckon—and so,

In the midst of the usual chaos before the take At least one unruffled soul Director Alfred Hitchcock [seated center] sits calmly by waiting for last minute preparations Hitch never raises his voice directs the most violent action as if he were ordering tea and crumpets in a cafe

Director Alfred Hitchcock, British born Master of Suspense lines up a camera angle on the set of his current production So well does Hitchcock know the mechanics of camera and lens that he never has to look through the viewfinder to check the photographic field that is being covered in the shot Training in art and engineering helped develop his fine sense of camera

in 1939, under contract to David O Selznick, the "Master of Suspense" discovered America—and vice versa

Films Without Tears

The Hitchcock approach to picture-making is a monument of thoroughness While the film is still in the planning stage, he works out camera treatment with the cinematographer Together they decide what kind of mood is to prevail in each sequence, and what visual techniques will be used to point up the action

"It is the task of the director in cooperation with the cameraman to arrange the elements of the scene into the most dramatic possible composition," he points out, "But the real chore is to constantly change compositions without the audience realizing it This calls for a mobility of camera keyed to the action, so that the elements of the scene can be shifted around in a changing pattern"

On the set, just before a new set-up is made, Hitch checks with the cinematographer on the camera approach to the scene He may make one of his famous quick compositional sketches if he has a particular effect in mind—but he stops right there, and lets the camera crew go about setting up the scene When they have made their set-up, he glances at the camera position and gives his O K for rehearsal There is no fuming and fretting about camera angle So perfectly does he know the mechanics of camera and lens that he never has to look through the viewfinder to check the field that is being covered

The calm way in which he goes about making pictures is in sharp contrast to the nerve-shattering suspense which he manages to produce on the screen He sits calmly in his canvas-backed chair, quietly surveying the scene and making casual suggestions to the Director of Photography and the actors from time to time He speaks in a low British-accented voice, directing the most violent action as if he were ordering tea and crumpets at *Claridge's*.

But all of this seemingly *blasé* calm on the set is the result of the most exhaustive preparation It takes Hitchcock 8 to 10 months to prepare a picture He memorizes the entire script So perfectly does he have the overall production in mind that the shooting phase is almost routine When asked by the author how his current production was progressing he replied, "Oh – we're grinding it through the machine."

The Camera and Cutting

Hitchcock considers camera movement part of the cutting or *montage* of the film, and uses it forcefully when the dramatic situation calls for a fluid approach—but he insists upon proper motivation, being distinctly opposed to camera movement merely for the sake of movement

In "Rebecca" he included a variety of follow shots in order to emphasize the lonely vastness of Manderley In "Foreign Correspondent," a somber spy drama, he let the camera move about and peer into out-of-the-way places in order to let the audience in on situations purposely withheld from the characters In "Notorious" he *zoomed* from a long shot of a crowded ballroom into a super close-up of a key held in a character's hand

He considers each scene, not only from the standpoint of composition, but with a definite eye for how smoothly it will cut into the rest of the picture Having his overall continuity so well in mind, he can photograph only what he really needs and thus reduce the editing job to a minimum

"I feel that, by and large, the film should be cut in the camera," he explains. "Every cut should be as smooth as possible so that it does not intrude into the dramatic situation Chopping in close-ups every moment is a distracting sort of thing, and leaves you with nothing emphatic to use when you really want to make a sharp statement"

So successfully does this *cutting in the camera* work out, that one of his editors once remarked, "There's no such thing as editing on a Hitchcock picture. You merely have to cut off the *slates* and splice the scenes together"

The Radical Camera

Because of his kick-over-the-traces attitude toward trying new photographic approaches, Hitchcock is looked upon by even his co-workers as a kind of camera revolutionary—and the record more or less bears this out In "Rebecca" he pushed the camera into a fiery inferno for the *fade-out*. In "Saboteur" he adopted an angle shooting straight down from the torch of the Statue of Liberty In "Lifeboat" he dared to shoot an entire photoplay within the cramped confines of a single lifeboat set In "Spellbound" he used the subjective treatment in such a way that the camera drank a glass of milk and ultimately shot itself with a pistol In "Notorious" he turned the camera *upside down* to simulate the way Cary Grant looked to a reclining and somewhat tipsy Ingrid Bergman

Conservative critics frequently sail into Hitch for his use of such extreme camera tricks, but this bothers him very little "Some camera tricks," he explains, "are the last remaining vestiges of pure cinema"

Admittedly, he sometimes thinks up a special effect and then develops a story situation to fit it. But such tricks are never merely thrown into the script They are always well motivated and keyed to

[Continued on Page 151]

SCREEN MAKE UP

By Alice Evan Field

SCREEN make-up is concerned with portraiture in a form not possible in any other medium The still portrait, whether it be a painting, a piece of sculpture, a drawing or a photograph, may be a mere likeness or it may be in the tradition of the great masters, Raphael, Titian, or El Greco But when the portrait has fluidity of motion under changing lights and shadows so that we see the swift turn of the head, watch the deepening lines of laughter or sorrow in the face, look deeply into eyes that reflect the inner thoughts as they come and go, we have an art that overcomes the limitations of the age-long striving of artists to reveal the personality which lies beneath the surface Nothing in the world holds so much fascination for the artist as does the human face and form, and in other media of expression, nothing is so difficult to portray Said Rodin "The true artist loves life and action His own being responds to it and he is ever looking for it in his fellow men."

The enchancment of natural beauty occupies a considerable part of the screen make-up artist's time, just as down through the years the portrait painters have devoted hours on end to the painting of beautiful women at their best More often than not the result was, and is, simply a charming impression, an exterior bit of loveliness that does not reach down into the life of the subject Sir Joshua Reynolds and Thomas Gainsborough influenced their contemporaries and those who came later by virtue of their portraits of aristocratic ladies in silken gowns and although their sterner critics accused them of "shop methods" the world still loves to look at their work Today in like manner the motion picture public is attracted to beauty of face and form in charming and decorative composition

Beauty make-up is what the studio experts term routine work and, yet, it demands constant study in scientific development of cosmetics in their laboratories and in improvement of techniques that alter with the progress of lighting equipment and camera lens Increasingly the trend is toward a minimum of powder, mascara, rouge and lipstick and toward a treatment that will bring out the natural skin tones and the interesting, unusual features The change is sharply noted in comparison of pictures made five years ago with those of recent release Conscious of an earlier and oft-heard criticism that all young players were groomed to a pattern which destroyed their individuality, the leading make-up men deny the charge as far as they were ever personally concerned, and point to the fact that the general trend today is to emphasize differences A young actress who fancies she resembles some well known star is promptly advised to forget it and try to be herself. All artificialities, such as the heavily accented mouth, the eyebrows plucked to a thin pencil line, are definitely frowned upon.

The work of the make-up departments begins at a very early hour in the morning If an intricate character portrait is to be achieved the player may be required to be in the chair at five a m. The simplest, most casual make up requires from thirty-five to forty minutes, following the daily shampoo and skin cleansing which inevitably preceeds it Seven o'clock is the customary hour of arrival for a player who is to be on stage for the first call at nine o'clock As one make-up man said this week, "If the women in the audience who marvel at the continued freshness and youthful appearance of their favorite actresses could but realize that absolute cleanliness is the basis of beauty much of the mystery would be solved for them Good health, plenty of sleep and relaxation are further important items"

Unlike the still photograph the motion picture portrait cannot be retouched All the retouching must be done before the picture is made- And all the tiny imperfections are magnified many hundred times, particularly in a close-up which fills the screen with an image approximately forty feet in height Furthermore, because the scenes of a script are not photographed in continuity, the make-up artist must make certain that the work he has done on a certain day can be exactly duplicated for further takes or retakes He may be required to repeat the fine shadings and highlights for a week or a month in daily succession, and he must be prepared for any changes in set lighting required by the mood or action of the story as visioned by the director-

True portraiture of a human being must give us more than the face, for there is much in the hands, in the pos-

VAN HEFLIN In straight pose (left), and at right in character makeup created by Jack Dawn for role in Metro Goldwyn-Mayer's production of "Green Dolphin Street"

RICHARD HAYDN British character acter (left) and with makeup creation by Wally Westmore for role of Emperor Josef I of Austria in Paramount production of The Emperor Waltz starring Bing Crosby

ture and in the movements of the body which express character, age, and temperament. In all of this significant action the make-up artist is particularly concerned today. Sometimes a harness for the shoulders or the knees must be contrived to give the desired rigidity to the muscles in portraying age. Wally Westmore of Paramount, who is now celebrating his twentieth year in the profession, recalls as one of his most difficult assignments the transformation of Barbara Stanwyck into a woman of ninety-six for *The Great Man's Lady*. Together they went out to study the movements of the old, old ladies at the Masonic Home and even then it was necessary to use some artificial devices to break the natural buoyancy of her step. Extraordinarily fine examples of the change from young womanhood to middle age were portrayed last year by Olivia de Havilland in *To Each His Own*, and by Rosalind Russell in *Sister Kenny*.

Character make-up holds a fascination for the highly trained expert who has a knowledge of sculpture, facial anatomy and highlights, and a real love of the art. Here, he departs from the well-known routine into a realm of imagination and creation that is exciting and rewarding. A revolutionary forward step in screen make-up was taken by Mr. Jack Dawn of M-G-M when he created plastic inlays for the character transformations of *The Good Earth*. So delicate is the material he uses that no slightest movement of the facial muscles is hidden, and so accurately measured and applied are the many little pieces used to change the structure of a nose, a chin or a forehead, that they defy detection. Like the painters of old he frequently uses himself as a model, and if you were to visit his office he would call your attention to four portraits that hang on his wall. One is a striking study of Lincoln seated in a big chair, another is the portrait of a funny little old man with flapping ears, which you would recognize as the character played by Harry Davenport in *Three Wise Fools*, the third bears a striking resemblance to Louis XVI of France, and the fourth is that of a Chinese eunuch, a round warlike face that is completely oriental in aspect. All are portraits of himself, transformed by sheer wizardry from his finely formed, intelligent, American face into something utterly different and completely convincing.

A highlight of Mr. Dawn's recent

(Continued on Page 147)

OLIVIA DE HAVILAND in straight portrait on left, and middle-aged via makeup for starring role in "To Each His Own," a Paramount production

Composition In Motion Pictures

Part 2. — Color

By Howard T. Souther

(Stephens Manufacturing Co Los Angeles, Calif.)

THE section immediately preceding has dealt with some of the elements of composition in which were discussed the tonal gradations of black and white. Tone, as a tool of pictorial synthesis, is the most valuable medium we possess. However, its precedence in the previous pages is unmerited. It should be a subhead under these pages dealing with color. The miracle of movement in black and white serves only as an indication of the sunstruck beauty and illusion which may be achieved through modeling with the luminism of the rainbow.

Rembrandt was amber and topaz. Velasquez was mother-of-pearl and old rose. Piero della Francesca was lavender and pale blue. Degas is ivory, pale rose and sable. Motion pictures, through the cunning of chemistry of Technicolor, is all of these and infinitely more.

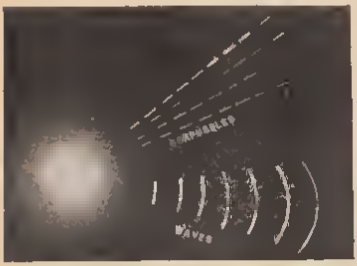
Color is almost synonymous with light. One does not exist without the other. Each is a property of the other. By knowing something of the nature of light, we know also the nature of color.

Some of the Properties of Light

The constitution of light at the present time defies definite analysis. In this particular it parallels science's attempt to determine the nature of electricity. Whether these phenomena are forms of pure energy or simply matter in motion is not known. In some ways a ray of light or a beam of electricity resemble matter. Both can be weighed, measured, felt and made to do a variety of things in a manner which we attribute only to concrete substances.

How Light Travels

Two hypothesis have been put forward concerning the manner in which light



travels: the corpuscular theory and the wave theory.

The Corpuscular Theory

The corpuscular theory (Newton) deals with light as being composed of infinitely small units of energy traveling from a source.

The Wave Theory

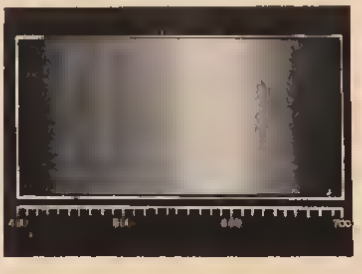
The wave theory, as propounded by Huygens, suggests that light travels in the form of waves from a source by transmitting its energy from one section of the ether to the other. This wave theory, as further developed by Planck, serves to explain some of the more subtle connections between the operation of light with electricity, magnetism, gravitation, et cetra. In the latter theory, all space is supposed to be composed of an elastic substance called the ether. Disturbances set up in this body by light transmission affect the ether in much the same manner of ripples when the surface of a body of water is agitated. In a surface of water, the action takes place in only two planes, forward and to the side. In the ether, this action is given an additional plane, up and down. The wave form is still retained but given another dimension.

The Speed of Light

According to the latest measurements the speed of light is the same as that of electricity, 186,000 miles a second in free space. This is constant for all frequencies of vibrations or wave periodicity. Through a transparent medium this speed is less and varies with the frequency. This accounts for chromatic aberration, or color separation, in lenses in certain areas.

Frequency of Light Vibration

If ripples in a pond are caused by agitation from a single source, the rate at which the agitation takes place determines the length between the crests of the ripples. The distance between these crests determines the wave-length. Because the speed of light is constant this distance between crests will at all times be constant in a given medium for a particular rate of vibration. The human eye is capable of perceiving light vibrations whose wave-lengths vary from about 4,000 to 7,000 Angstrom units.



The Angstrom Unit

Light may be measured in ordinary units of length. One unit is 1/1000 of a millimeter, designated by the Greek letter "mu." 7 mu is a shade of green in the light spectrum and would be called light of 5700 Angstrom units in wavelength. An Angstrom is 1/1000 mu. The use of this unit is more convenient in differentiating between two closely related colors.

Method of Color Classification (After Munsell)

The interpretation of colors by the individual seems to be a comparative thing. Certain standards of comparison have been set up in an endeavor to qualify light as closely as possible for working purposes.

Color in Light

The use of word color implies not only frequency of light vibration, but also its saturation with that color. It includes differences of brightness of luminosity also.

The Definition of White

White is said to be the color of sunlight passing through a minimum thickness of the earth's atmosphere at noon in a temperate climate. This term is used to designate light of no particular color. All of the color sensory organs of the eye do not respond equally to white light in normal persons. With red and greens as average, the yellow predominates to a marked degree. Blues and violets are darker.

Light of any particular wave-length, or with the absence of any particular wave-length, is said to be a *hue*. If we distinguish between two colors, apart from their brightness or whiteness, the difference in hues is said to set them apart.

Definition of Black

Black is the negation, or absence of all color.

Color Notation

Color notation involves the necessity of assigning abstract dimensions to the hues which we wish to classify. A mental image of the world of color includes the conception of a sphere. The presence of any color in relation to this sphere automatically assigns to that color the following:

1 *Hue* — Numerical measurement around a circle.

2 *Value* — Numerical measurement up a vertical pole.

3 *Chroma* — Numerical measurement of a horizontal away from the vertical pole.

In this way we may accomplish a

qualification for any color devoid of such confusing designations as orchid, gold, fuchsia, chartreuse, emerald, etc

Hue

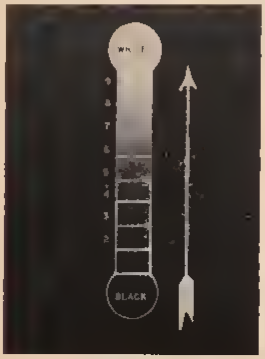
Hue is that quality by which we distinguish one color from another We distinguish red from green, purple from blue, yellow from orange But this does not disclose to us whether the color is strong or weak, nor does it show whether it is dark or light It merely refers to some part or point on the spectral scale

This spectral chart shows that the colors of red, yellow, green, blue and purple follow in the fixed order found in the rainbow, or in the light broken up by a prism We shall assume these colors to be affixed to a band which forms a circle as shown In reality these colors merge one with the other by indistinguishable degrees The band forms our first dimension of color

Value

Professor Munsell's definition of value is "that quality by which we distinguish a light color from a dark one" Our first dimension serves to inform us only that a color is green, and not blue It does not define that green as a light green, or a dark green It is the function of the dimension of value to tell us how dark or how light a given color may be For this purpose we may assign a scale to value, which we shall conceive as a vertical pole to the axis of our circle of hues

At the end of our pole we shall have an arbitrary designation known as "10 white" At the low end of the pole, we have a designation known as "zero black" Since pure white and solid black are unobtainable, these two extreme points will be slightly outside of our sphere. Therefore, gradation from black to white will include numerical steps from 1 to 9 Consequently, middle value obtains at 5, medium gray In writing the numerical value of a color, we denote by means of a number from 1 to 9 that point on the scale where the value falls A light green rests at G7/ A darker green rests at G2/



Chroma

As yet, we have by no means described a color completely Of an emerald, we may say that it is green and that it is light Also, we may say that certain grapes are green, and that they are light Still, there is a decided difference in their colors Both may be green and the same value of light But the emerald is *strong* in color, and the grape is weak in color, or grayer This virtue of a color, *chroma*, is represented by a horizontal pole in the color sphere

As the color progresses toward the center it becomes weaker, or grayer When it reaches the center it loses its distinguishing color completely and becomes gray

We designate this quality of a color by a numeral below a line, thus /3 Emerald green on the third step of value with a chroma of five, would be written G3/5

Complimentary Colors

We shall concede that there are three broad classifications of colors. These are RED, GREEN and BLUE-VIOLET When lights of these colors are mixed together in equal value and proportion we produce the white sensation These are known as primary colors If, for the sake of greater accuracy, we arrange and sub-divide these colors in the manner shown in the diagram, we have an arrangement partaking of the nature of a wheel If the spoke of the wheel which points to a color is followed through the neutral axis to the opposite side, it will designate the *complementary color* This designation is not haphazard Not only does the complementary color offer the *greatest contrast*, but the two colors when mixed will produce a shade of gray When we mix lights of various hues expressed as pale yellow, magenta not only are we mixing red, green and blue-violet, but also composite lights of hues expressed as pale yellow, magneta, green, et cetera This mixture in its entirety produces white light The brightness is additive and increased value is the result of mixing lights of different hues.

Color Balance

The advent of Technicolor into our work predisposes a working knowledge of color and color harmonies These harmonies consist of manipulating the color elements of our composition in such a

manner that our effect may be projected to greater purpose and *without irritation* We eliminate the irritation of color by proper color balance This may be done in two ways; qualitatively and quantitively

Qualitative Balance in Color

We have stated in a previous paragraph that mixing an equal value of one color with an equal value of its complementary will result in a shade of neutral gray; This is another way of saying that the two hues balance

But observe this phenomenon

If we mix equal parts of red at its maximum chroma with its complementary, blue-green, at maximum chroma, we do not get a perfectly neutral gray. We accomplish a color in which the red predominates to a very marked degree; If, instead of taking equal amounts of the two colors, we take equal steps upon the scale of chroma, we find that they do balance and form neutral gray In this gray neither of the two hues predominate This will serve to explain why the diameter of our color sphere is limited to the shortest chroma path at middle value In this sphere all complementary colors balance at each level of value

Quantitive Balance in Color

The study of color does not limit the use of color It serves merely to regulate its use. Sometimes we may wish to use a hue with a weak chroma with the opposite hue in strong chroma This is done through regulating the area which each hue will embrace. If the weak color embraces an area twice as large as the hue one-half as strong in chroma, we effect perfect balance

Now, bear in mind that we have been discussing only two hues, and remember that these hues have been equals on the scale of value and have differed only in chroma strength

It is not often expedient or whole

(Continued on Page 148)

MAGIC LANTERN COMES HOME AGAIN

By IRVING BROWNING

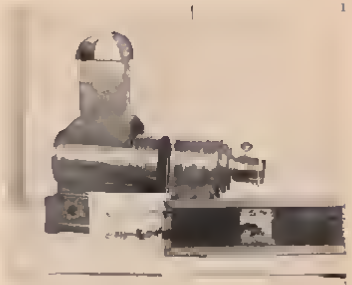
IN the early 1900's and the late 1800's there was a wide use of the kerosene burning magic lantern in the home The "Magic Lantern" show dad put on for the family, many of us will remember as the thrill of our lives Seeing pictures on the wall in the living room as dad drew the slide to change pictures as he explained the different pictures which he projected Today, besides having movies in the home, dad owns a "magic lantern," under the guise of a "slide projector" which has modern refinements such as electricity, fine optical elements, photographic color slides, compared to the early decalcomania transfers or hand painted picture slides of grandpa's day

When I was a kid, I owned a small kerosene burning "magic lantern" which cost, with six to ten slides, about ninety-five cents I recently purchased an old one like it for which I paid $10 00 which I added to my collection. The magic lantern is back in the home again and dad is once again projecting pictures for junior on the wall or on a screen. Historical subjects and even junior's school lessons can be seen via the "magic lantern" projector. To his personal friends he has a series of "arty" pictures, not meant for junior's questioning stares.

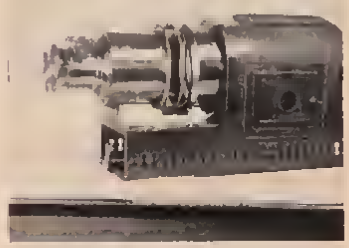
The history of the magic lantern is an interesting historical incident of home entertainment and played as important a part in the development of the motion picture as did other animate and inanimate projection methods The magic lantern goes back many centuries ahead of photography and as we know the development of photography soon after the coming of the film strip we saw the gradual progress of a picture projected in motion

The magic lantern became an instrument for projection on a white wall or screen where magnified representations of transparent pictures painted or photographed was a source of entertainment The invention is attributed to Athamosius Kircher, who described it in the first edition in 1646 of his Ars Magna Lucis et umbrae, but it is very probable of even earlier discovery For a long time the magic lantern was used chiefly to exhibit comic pictures, but in the hands of so called wizards who practised summoning up of ghosts and other tricks, astonished those ignorant of simple optical principles then employed The magic lantern moved up to become an instrument used by lecturers who had shown a series of story slides to children and grown-ups Grimms' and the Lewis Carrol Fairy Tales for the kiddies, and travel pictures for the grown-ups, painted by artists on glass was illustrated, projected and a narrator enacted the characters as the children thrilled at the projected pictures

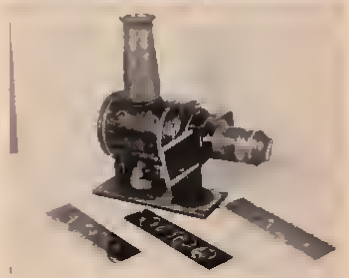
(Continued on Page 139)



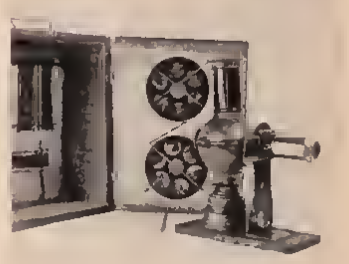
Marcy's Sciopticon manufactured in 1868 Two wick kerosene burning magic lantern Slide has two exposures to provide illusion of motion One had picture of Noah's Ark and other a line of animals, birds and people Sliding latter over first gave illusion of entering Ark



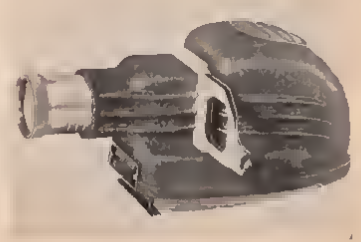
Another magic lantern English or American make having three wick kerosene lamp A lecturer's outfit probably dating back to 1875



Magic lantern for the home with small kerosene burning lamp Slides are two by eight inches and had hand-painted images Circa 1890



Home magic lantern kerosene burning type Had two types of slides—circular and oblong of one by five inch size Hand painted objects on slides Circa 1880



Modern "magic lantern"—or 2x2 slide projector Electric, with fine optical elements metal casting crackle painted Circa 1946

This photograph was made directly through the [illegible] of the Maurer [illegible] Camera

You *really see* what you shoot — with the new MAURER

Racking over the body of the Maurer 16-mm Professional Camera places a clear glass reticle behind the taking lens for viewing and focusing.

There is no *ground glass* in the optical system — you see all the details of the image clearly. The image is bright and erect — exactly as it will appear on the film. The projector aperture outlined on the reticle indicates what will be shown on the screen.

The focusing microscope has three interchangeable objective lenses. One gives a brilliant, clear view to the extreme corners of the wide-angle field. The second objective gives the same view of the full field with all other taking lenses.

The third objective is a high-power lens used for critical focusing. It magnifies only the area shown within the dotted circle in the illustration.

"Critical focusing" is given new meaning with the Maurer Camera, as you will see next month.

maurer

This advertisement is the third of a series explaining the features of the Maurer 16 mm

J. A. MAURER, INC.

3707 31st Street, Long Island City 1, N. Y.

Professional Motion Picture Cameras and Recording Equipment for the Production of Industrial, Educational and Training Films

Academy Award Winners Best Cinematography — 1946

"ANNA and THE KING OF SIAM" "THE YEARLING"

BEST photographed motion picture production in color released during 1946 — Metro-Goldwyn-Mayer's "The Yearling." Best black-and-white photography, Twentieth Century Fox's "Anna and the King of Siam." Best photographic effects, "Blithe Spirit," Noel Coward-Cineguild production for J Arthur Rank

This is the verdict of the members of the Academy of Motion Picture Arts and Sciences, as announced at the 19th annual Academy Awards presentation event held at the Shrine auditorium, Los Angeles on evening of March 13th, 1947. Every one of the 6,700 seats in the huge auditorium was filled by members of the film industry and the public; and the event was broadcast by radio nationally, and via short wave for overseas listeners.

The Academy Award announcements and presentations for best productions, best acting, writing, cinematography and other achievements during the previous year in film production, have always been recognized as the verdict of those closest to actual production and its many ramifications and intricacies in Hollywood.

ARTHUR MILLER, A S C accepting the Academy Award "Oscar" for his outstanding photographic direction on "Anna and the King of Siam" from Ann Sheridan

Photo by Harold Mays

Awards for Best Cinematography

Arthur Miller, A S C, Director of Photography on "Anna and the King of Siam," received the annual Oscar for best achievement in black-and-white cinematography, and has been the recipient of similar honors twice previously—for "Song of Bernadette" and "How Green Was My Valley." In the final voting, Miller nosed out the other finalist, George Folsey, A S C, Director of Photography on Metro-Goldwyn Mayer's "The Green Years."

Charles Rosher, A S C, Leonard Smith, A S C, and Arthur Arling A S C, each received Oscar statuettes for their work as Directors of Photography on the Metro-Goldwyn-Mayer Technicolor production of "The Yearling." Rosher was an Academy Award winner 19 years ago at the initial presentation event, while Smith (President of the A S C by the way) was in the finals for 1945 with his "National Velvet."

In receiving his Oscar from Ann Sheridan, who made the presentations of awards for cinematography, Miller praised his camera crew and extended thanks for cooperation during production Rosher followed the same thought in accepting his Oscar for "The Yearling" honor; while Smith stated those remarks went double for him and that "Brooklyn will be proud of me." President Smith, by the way, is a native of Brooklyn, and later received a congratulatory wire from the Chamber of Commerce of that city!

"The Yearling" had Columbia's "The Jolson Story" in the finals for the best in color photography It is interesting to point out that Joseph Walker, A S C, Director of Photography on "Jolson Story," was initiated into photographing a color production on this picture; and the fact that it reached the finals for consideration is noteworthy

Special Effects to England

Best demonstration of the international consciousness of those engaged in film production in Hollywood was the voting of four Academy Awards to individuals identified with British productions For best achievement in special

LEONARD SMITH, A S C (left) CHARLES ROSHER A S C (center) and ARTHUR ARLING A S C are presented with their Academy Award Oscars by Ann Sheridan for their noteworthy accomplishments as Directors of Photography on The Yearling Metro-Goldwyn-Mayer production

Photo by Ed Hubbell

photographic effects, Thomas Howard was signally honored for his work on "Blithe Spirit," the Noel Coward-Cine guild production made in England for J Arthur Rank A Hollywood representative for the latter accepted the Oscar for Howard

Best sound was judged as "The Jolson Story," with John Livadary, head of the Columbia sound department, accepting the Oscar for the accomplishment

Black and White Cinematography

To Arthur Miller, A S C, for his inspired lensing of Twentieth Century-Fox's "Anna and the King of Siam," goes this year's Academy award for black and white cinematography

No stranger to the award, Miller has won this top honor twice before, the last time for "The Song of Bernadette" If anything, his style since then has become even more craftsmanlike, and "Anna" bears evidence of a camera style perfectly suited to the story which it presents

In this picture, Miller was called upon to produce an atmosphere faithful to the exotic country of Siam In addition, it was a period film, and a plot devoid of the usual dramatic elements of a love story On the first count, Miller adapted his lighting style perfectly, producing effects of authentic and medieval beauty He managed, also, to capture the spirit of the period, achieving this result through a well-balanced combination of lighting and camera angle

It is difficult to place your finger on the exact elements which lend excellence to Arthur Miller's photography His approach is so purely cinematic and devoid of theatrical tricks that no one factor stands out as being obvious in any way A sincere and modest camera artist, he realizes that the purpose of motion picture photography is to interpret a dramatic story to best advantage, and he bends all his efforts toward just that goal

Miller has long been regarded as a master of realistic lighting There is never a discrepancy between source and lighting The light always seems to fall on the subject in the way that it would naturally fall in the actual situation—yet it is not harsh, as lighting sometimes becomes when made to look realistic in the *documentary* sense While retaining an authentic feeling of realism, he yet manages to breathe into his photography the quality and finish which critics and public alike have a right to expect of Hollywood

If one phase of Arthur Miller's style were to be held up as being unique, it would probably be his "feel" for camera movement His is a fluid but unobtrusive camera, geared to move with the story He never trundles the camera about merely for the sake of movement There is always a strong motivation for such effects, and he seems to sense exactly when and where to use them

In "Anna and the King of Siam," Miller has produced a film that shows quality in every frame It ranges in mood from the lavishness of the royal court to the sordid atmosphere of native huts and compounds His dramatic flair is best exemplified in the sequence where the king's unfaithful wife is burned at the stake His sense of composition finds expression in the garden sequences showing the kings harem attending school

Besides adapting his photography closely to the film's theme, Miller also presented the picture's stars to best advantage Irene Dunne has never been more capably photographed Rex Harrison, in his American debut, also profited by the expert camera presentation

To Arthur Miller, this year's Acad-

emy award must seem like a familiar story—but sincere artist that he is, he cannot fail to recognize it as the industry's continued tribute to his superlative skill as a cinematographer

Color Cinematography

Charles Rosher, A. S. C., Len Smith, A. S. C., and Arthur Arling, A. S. C., share the triple honor of this year's Academy award in color cinematography for their masterful teamwork in photographing M-G-M's Technicolor production, "The Yearling."

Rarely, if ever, has there been such a happy blending of talents among cinema craftsmen "The Yearling," an all-around excellent film, owes much of its force to the magnificent exterior photography which consistently arrests the attention of the spectator. It is a treat to the eye as well as a potent factor in advancing this story of struggle and poverty in the Florida marshlands.

Made largely on location in the actual locale of the story, the film deserves double praise because the cinematographers had to work without many of the photographic refinements which are available on a film shot in the studio.

"The Yearling" is a highly dramatic story, and photography was called upon to convey many of the nuances of emotion which lend credence to the theme While preserving the photographic excellence for which M-G-M is noted, it might have been all too easy to make the camera treatment too glossy, too "Hollywood" in approach But the three cinematographers responsible for the result restrained themselves admirably. They achieved a beautiful and artistic style of photography while still retaining the authentic flavor of the rustic story and locales presented.

Throughout the film source light was carefully simulated Firelight looks like firelight. The sun coming through a window has the fresh glare that real sunlight has The interiors are lighted with a naturalness that lends a realistic, almost documentary, effect to the whole story.

But, by and large, "The Yearling" is an *outdoor* story, and it is in this phase that the photography reaches heights seldom equalled before on the screen A great deal of sensitivity was shown in recording the atmosphere of different times of day and different seasons The cool crispness of dawn, the rosy radiance of sunset, the dismal threat of rain—all these phases of nature are portrayed to perfection

Composition in the film was held to uncomplicated, story-telling patterns There was no "art for art's sake" Rather, the approach was straightforward and clean-cut—slanted in such a way as to present a story of basically simple people to best advantage.

One of the best staged and photographed sequences in the picture is that which shows the details of a bear hunt Here, amongst dense forest, swamp and brush, the camera was called upon to show clearly the details of action that could scarcely be called predictible—animals bounding in every direction at will In order to keep up with and emphasize the chase, a moving camera was used Here the instrument went crashing through the underbrush at top speed recording with astounding precision the movements of several human and animal characters at the same time. Merely to capture the action at all was an almost impossible task—but that the cinematographers were able—in addition, to secure an almost breath-taking photographic quality is little short of a cinematic miracle This sequence stands out in "The Yearling" as a dramatic and photographic highpoint of the entire film.

Special mention must be made of the effective use of low-key interiors, plus the precision with which studio-made shots were made to match and cut in with scenes shot in the actual locale of the story. Another device used to striking advantage in several outdoor sequences was *silhouette*, especially when used to show action against a sunset sky

Rosher, Smith and Arling are to be highly complimented for an outstanding contribution to motion picture art, as well as for fulfilling the prime purpose of color cinematography—that of telling a story in the most vivid and forceful manner possible

Special Photographic Effects

To Thomas Howard goes this year's Academy award in special photographic effects in recognition of his outstanding trick cinematography for the Noel Coward-J Arthur Rank production, "Blithe Spirit."

American theatregoers will recall this delightful British film as the story of a young man haunted by the ghost of his deceased wife. The spirit in question is a whimsical, mischievous wraith who appears and disappears at will causing all sort of confusion in the household.

The special effects called for in photography were mainly applicable to situations where the ghost in its invisible state flings bric-a-brac about the room, slams doors, holds overcoats for people, and performs other types of disembodied trickery

These situations were handled so expertly, that an audience is able to forget that they are watching out-and-out tricks, and are able to become pleasantly absorbed in the fantastic spirit of the whole affair.

The excellence of the special effects in "Blithe Spirit" is one more evidence of the tremendous technical strides which the British film industry has made in the past few years.

Scientific and Technical Citations

Each year, in addition to recognizing artistic achievement in the motion picture industry, the Academy of Motion Picture Arts and Sciences has honored scientific and technological achievements of outstanding merit through the Scientific or Technical Awards.

Awards for Scientific or Technical Achievement are bestowed "upon recommendation of the Academy Research Council, for a device, method, formula, discovery or invention of special and outstanding value to the art or science of motion pictures."

Toward the end of each Awards year, nominations for Scientific or Technical Achievement are invited from the studios and from manufacturing, development and equipment companies in the motion picture industry. The Research Council carefully reviews each nomination, appointing subcommittees of experts from the various technical fields within which the nominations are made, to investigate the originality and ingenuity connected with the development, and to consider the application of each nomination and its importance to the advancement of the industry.

The final responsibility for bestowing these awards rests with the Research Council. Nominations are considered for possible recognition under the following three classifications, subject to the requirements listed

Awards in Class I (Academy Statuette) for those achievements which have a basic influence upon the industry.

Awards in Class II (Plaque) for those achievements which have a definite influence upon the industry but merit recognition to a lesser degree than the Class I award.

Awards in Class III (Honorable Mention in the Report of the Research Council) for those accomplishments which are important to the progress of the industry

The credit for Awards in the artistic classifications is essentially an individual achievement In the engineering field, this is rarely, if ever, the case. No matter how meritorious or ingenious a development may be, it is necessarily based on prior art and on various earlier developments Consequently, in these Awards it is usually impracticable, if not impossible, to name every individual who may have contributed to the particular achievement in question In a report such as this, it is only possible to name the individual or group whose work has led to the final culmination of the development However, from an industry point of view, this is the important achievement and the Scientific or Technical Awards which have been given since 1930 constitute in effect a historical record of development within the industry, so that the recipients of these awards can feel that their work has become a part of this record

This year the Academy Research Council reviewed forty-six nominations and bestows Awards for Scientific or Technical Achievement as follows:

Awards in Class III (Honorable Mention in the Report of the Research Council)

To Harlan L. Baumbach and the Paramount West Coast Laboratory for an improved method for the quantitative determination of hydroquinone and metol photographic development.

(Continued on Page 145)

We Proudly Congratulate—

ARTHUR MILLER, A.S.C.

Director of Photography

For Outstanding Photographic Achievement
In Black-and-White

"ANNA AND THE KING OF SIAM"

20th Century-Fox Production

CHARLES ROSHER, A.S.C.
LEONARD SMITH, A.S.C.
ARTHUR ARLING, A.S.C.

For Outstanding Photographic Achievement
In Color

"THE YEARLING"

A Metro-Goldwyn-Mayer Production
in
Technicolor

J. E. BRULATOUR, Inc.
Distributors

FORT LEE CHICAGO HOLLYWOOD

To Our Fellow Cameramen, Thanks

CHARLES ROSHER, A.S.C.

LEONARD SMITH, A.S.C.

ARTHUR ARLING, A.S.C.

Best Color Photography Award

1946—"THE YEARLING"

for

METRO - GOLDWYN - MAYER

1946

19th Annual Awards

ACADEMY OF MOTION PICTURE ARTS AND SCIENCES

Leo is Proud!

And Congratulates . . .

CHARLES ROSHER, A.S.C.
LEONARD SMITH, A.S.C.
ARTHUR ARLING, A.S.C.

for the
Academy Awards
presented for the color
photography of

"THE YEARLING"

METRO-GOLDWYN-MAYER STUDIOS

The Members of

The AMERICAN SOCIETY of CINEMATOGRAPHERS

Extend congratulations to . . .

ARTHUR MILLER, A.S.C.
CHARLES ROSHER, A.S.C.
LEONARD SMITH, A.S.C.
ARTHUR ARLING, A.S.C.

for their outstanding achievements in cinematography during 1946 which accorded them Academy Award recognition.

Magic Lantern

(Continued from Page 130)

I have several such magic lanterns, professional types made in 1868 in Philadelphia

Experimenters always seeking to thrill the public toyed with double exposure projection A slide of an angel in flight and a slide of clouds which was moved behind the angel giving the effect of motion. Automatic dissolving was practised by blocking out the picture of one projector while another projector lens was uncovered by an engenius pair of thin metalic shutters terminating in comb-like teeth and movable by rack or lever; in that way, the light could be gradually cut off from one to the other and one view appeared to melt or dissolve into the other. This arrangement was first adopted by Childe in 1811.

One of the tricks of the early days of slide projection was the "Phantasmagonia"; In this arrangement the picture on the screen appeared gradually to increase or diminish in size and brightness. To affect this, a semi-transparent screen of cotton or other material is used, the projection was from behind the screen with the audience in front The magic lantern was mounted on wheels so that it could be rapidly moved up or withdrawn from the screen, an automatic arrangement is provided whereby simultaneously with this the objective is made to approach or recede from the slide so as to focus the picture on the screen in any position of the lantern In this way a very small picture appears gradually to grow to enormous dimensions. ***See L Wright, Optical Projection (1891) E Frutat, Traite des Projections (Paris 1897 and 1901) P E Leispegang, Die Projektions—Kurist (Leipzig 1909).

In my own collection of motion picture cameras, projectors, films and magic lanterns, I have a series of home type of motion picture mechanisms, the early development of projection entertainment which today represents one of the world's five greatest industries The little magic lantern was then just a toy but inventors, experimentors, men of optics, physics, arts and engineering spent their never ending efforts in developing its artistic merit to commercial success; the Nickelodeon became Palaces of projection entertainment, to be enjoyed by every one for a comparative pittance.

The early narrated "Magic Lantern" show antidated such performances as the Burton Holmes illustrated lectures, Fitzpatrick Travelogues, The Disneys and all the others The magic lantern as the lantern slide illustrates was all of those rolled into one. The narrator dramatized the slides with stories by imitating each character. The better the performer, the more thrilled his audiences All the early "magic lanterns" on these pages are of American manufacture and each burned either a single, double and three kerosene wicks for light Today's electric slide projector is its counterpart The magic lantern has come home again in a new dress, but with the same old stories.

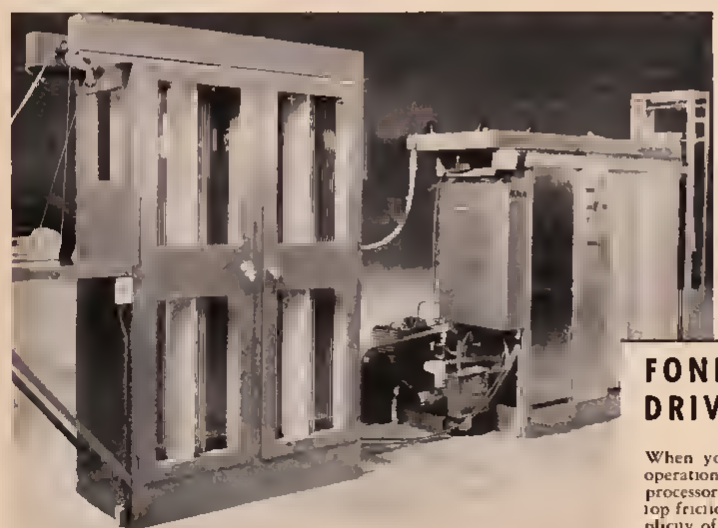
Kodaflector Senior, Model 2, Announced

An "ambidextrous" lighting arrangement for indoor picture taking, which provides picture takers with two reflectors for flood lamps, both capable of swinging horizontally or vertically on easily adjustable arms, is now available in the Kodaflector Senior, Model 2

In addition to the greater flexibility of the arms, further improvement is offered over previous models, in that the legs are screwed into the base rather than being held by friction Kodaflector Senior, Model 2, is applicable to amateur and professional still and motion picture filming.

Telefilm Technical Service

Joseph A. Thomas, president of Telefilm 16 mm Studios of Hollywood, has notified the Association of National Advertisers that the company has set up a technical data service for the information of members of the advertising organization with latest developments in 16 mm. production.



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The Cinema Workshop

(For Semi-Professional and Amateur Production)

10. Sound and Film

By CHARLES LORING

UP until quite recently, sound in motion pictures was considered prohibitive luxury — something only professional film studios could afford. But now that sound recording equipment has become less complicated (and less expensive) and 16 mm sound has reached a high degree of perfection, sound-on-film is within reach of the advanced amateur and semi-professional movie-maker. In applying this added element to the visual image, however, he must use a vastly different style of direction from that used on silent films.

In a later chapter, we shall delve quite deeply into the technical details of sound cutting and recording; but, for now, let us consider some of the less tangible aspects of applying sound to the visual image.

The era of the silent film has passed and, except for the simplest kind of "home movies," all modern films are shot with the intention of applying sound, either *directly* during filming, or in *narrated* form after the film has been cut.

Whereas in the silent film the audience had to depend solely upon a *visual* impression, sound adds another powerful appeal to the senses and thus makes possible a greater degree of realism on the screen, since action alone is not required to carry the full weight of interpretation of the story. Therefore, it is not necessary to use the exaggerated gestures and broad pantomime that were so obviously a part of the silent film. You can direct your action with a much more subtle touch, depending upon sound to add the little extra nuances of realistic meaning.

The Role of Sound

There are two principal ways in which sound points up the effect of the visual image: (a) complement and (b) contrast. As a *complement* to the picture, recording adds the sounds that an audience naturally associates with what is shown on the screen, and therefore *expects* to hear. Simply illustrated, a shot of a train rushing toward the camera is much more effective when accompanied by the roar of a locomotive than if it appears silently — because that is the sound an audience associates with a train, and to omit it creates an unreal impression. This means that the film-maker should record or dub onto the sound track the sounds characteristic of major actions shown in the film.

On the other hand, sound *contrast* is sometimes amazingly effective in sharpening a dramatic or comic situation. For example, if a murder is portrayed as taking place to the accompaniment of blaring jazz on the radio, the horror of the situation is vastly intensified. If a tragic situation is shown accompanied by laughter and the merry sounds of a party off-screen, the pathos of that situation is sharply increased.

In any case, the choice of sound and the manner in which it is used are both dictated by the effect which is desired. In each scene either the visual image or the sound should predominate, in no case should they have to fight with each other for the audience's attention.

Sound and Psychology

Without meaning to imply that sound-on-film is some sort of mysterious force, it can be said that motion picture sound scores its most powerful effect through the psychological reactions it inspires in an audience; and it is important that this element be clearly understood if a really good film is to result.

Firstly, sound creates an *association of ideas*. Simply stated, this means that if an audience hears a train whistle, it will associate that sound with a mental picture of a train. Thus, if the sound of an airplane is heard over a close-up of a character scanning the sky, the audience will assume that he watching an airplane, even though none is actually shown. The film-maker can often use this technique to good advantage in creating a visual illusion without even showing the source of the sound, but he must make sure that the sound is an easily identifiable one. On the other hand, dramatic suspense can sometimes be created by presenting an unusual sound and showing the character's reaction to it before identifying the actual source of the sound by a visual cut.

The second major psychological function of sound is the setting of *mood* for a sequence. If, for example, you *fade in* on a close-up of a merchant seaman smoking his pipe on a loading dock, and the scene is underscored by the moaning of fog horns and the eery creaking of ships' gear, an atmosphere of somber expectation is instantly created. If instead, under the same scene, you dub the sounds of hustling activity, ships' bells ringing, and men running up and down the gangplank, an entirely different mood is set from the very beginning. Thus, a sound background is a versatile instrument for setting the key mood for a sequence, and, as such, it should be carefully considered when the overall approach to the film is being planned.

Sound can be a potent factor in drawing scenes tightly together for improved continuity. We speak of a *sound bridge* as referring to a continuous sound pattern linking several separate scenes. For example, if we were creating a *montage* of New York City, we might show a number of scenes filmed in widely scattered locales; but, underscored with a continuous sound pattern of traffic and crowd noises, these scenes would be sharply drawn together to form a potent unified impression.

Similarly, "stock" shots of an authentic locale can be made to tie in more smoothly with staged shots supposedly taking place in the same locale, if the same background sound pattern is used behind all of the scenes. Hearing the continuous sound bridge, the audience will automatically assume that all scenes which it underscores were filmed in the same place.

Types of Recording

Sound-on-film is recommended to the film-maker in preference to disc recording, because once the sound is actually printed alongside the picture, you have a visual and an aural pattern permanently recorded side by side and in perfect register. However, should sound-on-film prove too costly for the budget, many of the same recording techniques can be used effectively in placing the sound on discs to be played while the film is being projected.

By way of equipment for sound-on-film recording, there are available to the semi-professional film-maker several excellent systems of direct 16 mm. sound — notably the Auricon, Maurer, WE and R.C.A.-Victor machines. All of these are relatively portable and are available on a rental basis in many of the larger cities. However, since direct sound recording is a rather precise business, it is wise to have a trained technichian at the controls, and rental establishments usually have such personnel available.

A far simpler and less expensive system of recording is that which utilizes *narrated* sound applied after the visual footage has been cut. This type can be readily combined with any silent footage that has been shot at the standard sound speed of 24 frames per second.

Most large cities have recording services especially equipped to record narration, sound effects, and background music onto a composite sound track synchronized with the action. The fee for this service is nominal considering the extra quality which such sound adds to

(Continued on Page 153)

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Ciné-Kodak Tripod—designed especially for precision shooting with all amateur movie cameras. *Kodak Eye-Level Tripod*—a reasonably priced camera support for movie making with all but the heaviest cameras. *Ciné-Kodak Tripod Truck*—movie mobility under "toe-tip" control. Yes, here's tripod quality from head to foot.

Better see your Kodak dealer about these aids to better, *steadier* movies. Ciné-Kodak Tripod—$42, Kodak Eye-Level Tripod—$16.75, Kodak Turn-Tilt Tripod Head—$13.25, Ciné-Kodak Tripod Truck—$55. *Tax extra.* EASTMAN KODAK CO., Rochester 4, N. Y.

Kodak Eye-Level Tripod, when equipped with Kodak Turn-Tilt Tripod Head, is ideal for movie making with lighter-weight cameras. The Tripod is instantly adjustable for heights from under 2 feet to 5.

Kodak

AMONG THE MOVIE CLUBS

Utah Cine Arts

Officers of Utah Cine Arts Club, have taken a dare, and all promise to enter films in this year's contest, or forfeit the entrance fee. Seems like a fine idea to generate member interest in annual contests by having the officers take the lead.

February 19th meeting was held in the Terrace Room of Newhouse hotel, and feature of the evening was Arnold Whitaker's "Adventure South," a 2,000 foot 16 mm. color subject taken of an auto expedition by three men from Detroit to Tierra Del Fuego—the southmost tip of Argentina, South America.

Fifth annual banquet and installation of officers was held in January, with an excellent film program supplied by Al Morton, LeRoy Hansen, Theo Merrill, and Al Londema. Officers for 1947 are: Theo Merrill, president, Al Londema, vice president, John Allein, treasurer; and Helen Christensen, secretary.

New York Eight

Film program for the February 17th meeting of New York Eight MM. Club, held at the hotel Pennsylvania, included: "Escape," by Harry W. Atwood; "Pinocchio's Jack-O'-Lantern," by Harlan M. Webber; "The Magnificent Accident," by Mr. and Mrs. Raymond Berger; and "Farm Frolics," and "It's All Over," by Terry Manos.

At the January 20th session, films exhibited were: "Baby's Bottle Parade," by Maurice Krakower, "How to Win Friends," by Fred Evans of Los Angeles; "George Washington Slept Here," by the Edward Roeskens, "Stanley Goes to Camp," by M. Frifeld; and a kodachrome oldie of Arizona by Joe Hollywood.

Alhambra La Casa

The ladies of La Casa Movie Club of Alhambra, Calif. provided the program for the March 17th meeting, with Mrs. Marjorie Conrad as chairman and announcer. Films presented included: "High Sierra, Sequoia," by Mrs. Fred Gill, "Dance of Spring," by Mrs. R. A. Battles; "India," by Miss Lillian Stevens, "Indian Country," by Mrs. C. H. Bodner; "Scenes Along the Highways of the West," by Mrs. Marjorie Conrad; and "On and Off the Highway—Oregon," by Mrs. Nella Stiverson.

Philadelphia Cinema

Films entered in the annual contest of Philadelphia Cinema Club were exhibited at the March 11th meeting, held in the Little Theatre of Franklin Institute. George A. Pittman, Oscar Rahn, and Frank Heininger functioned as judges.

Annual banquet of the organization will be held on April 15th.

Los Angeles Cinema

Typical California rainstorm (high fog to the natives but a deluge to others) failed to dampen the interest of the large audience which turned out for the March 3rd meeting of Los Angeles Cinema Club, held in the Fine Arts Room of the Ebell Club. Highlight of the evening was demonstration of the newly-developed Bardwell & McAllister film titler by Mr. Olson of that company, and exhibition of a color film depicting method of operation of the titler. Magnetic tape recording and its possibilities for economical use by 8 and 16 mm. enthusiasts was demonstrated by Mr. Neely of Magnetic Recordings. Member Dow Garlock then showed his 8 mm. picture with music recorded magnetically.

Charles Ross presented his "V-E Day in New York" to illustrate the value of background music. Other films shown included "Spooks and Sports" and "Tiantella," by Mary Ellen Bute; and Leo Caloia's "Young America Rides" and "Hollywood."

Minneapolis Octo Cine

M. F. Ohnstein heads the Minneapolis Octo Cine Guild for 1947, with other officers comprising: Ralph Mueller, vice president; John Brandon, treasurer; and Bernard L. Altermatt, secretary. Octo Cine Guild, the only exclusive 8 mm. club in Minneapolis, has about 50 members—all males.

At the January meeting, it was voted to place all members in one of four groups—according to district each lives. Plan is for each group to produce one indoor and one outdoor movie during the year, with film to be furnished by the club. In addition, each group is to furnish program for at least one meeting during the year. Looks like a fine idea which can be adopted by other clubs to generate competition and interest among members.

San Francisco Westwood

February 28th meeting of Westwood Movie Club of San Francisco, held at St. Francis Community Hall, presented film program arranged by Angus Shaw comprising: "Line Steamer Meet," by Larry Duggan, "Base Camp of Sierra Club of 1946," by Barbara and Bill Helm, and "Titling and Editing," an educational film supplied by Bardwell-McAllister.

Committee chairmen who will function during the coming year are: Angus Shaw, program, Don Campbell, membership, Eric Unmack, publicity, Walter Johnson, contest; Jess Richardson, technical; Ray Luck, projection; and Mrs. Shaw and Mrs. Unmack, hostesses.

Milwaukee Amateur

Fourth annual Gala Show of Amateur Movie Society of Milwaukee was held at the Shorewood Auditorium on March 22nd. Capacity audience witnessed a program of prize-winning amateur films secured from all parts of the country. Among the pictures shown were: "Lake Mohawk Preferred," by Leo Hefferman; "Squeaky," by Walter Bergmann; and "Kaleidoscopic," by Dr. Robert Machado of Havana. Bill Vogel functioned as master of ceremonies, with Bill and Mabel Rheingans supplying the musical arrangement with their new Fideltone turn-tables.

"So You Want to Write a Scenario?" featured the March 12th meeting, at which time the scenario committee explained the fundamentals and technique of preparing a script, and then showed the finished picture. At the March 26th meeting, Arthur Elliott showed his 16 mm. Kodachrome, "North of the Border."

Los Angeles Eight

Business was held to a minimum at the March 11th meeting of Los Angeles Eight MM. Club, held at the Bell & Howell auditorium, to allow for a full evening of film entertainment. In addition to the Army Air Force 16 mm. soundfilm, "Able Baker," three remaining contest pictures were shown—"The Big Sleep," by W. D. Garlock; "New York, August 1946," by A. Larsen, and "Beverly Wilshire July 4th," by R. Beazell.

Additions to the club's film library include: "MacArthur Liberates Manila," "Yanks Smack Truk," and "Yanks Invade Africa." Also Fred Evans' prize film, "How to Win Friends and Influence People" will be copied for the library.

Feminine members are busy lining up entries for the Ladies 50 foot contest which will be judged in June. Outing committee chairman Harold McEvers is lining up interesting locations for several club filming expeditions during the summer months.

Seattle Amateur

Ralph Lund was selected as vice president of Seattle Amateur Movie Club to succeed Walter Mankowski, who was unable to serve because of other duties.

At meeting of February 11, held at Parish Hall of Church of the Epiphany, film highlight was Raymond J. Hague's "Hunting Big Game on Horseback." This splendid 1,200 foot subject in 16 mm. kodachrome detailed a 24 day trip in the Chilco Lake area of British Columbia hunting deer and moose.

Production of the club's 1947 picture is currently under way, with Mrs. Theodore Bradley and Bill Crock playing the leads.

That Vacation Picture

By W. D. GARLOCK

Past President, Los Angeles 8mm Club

WITH vacation time just around the corner, the next couple of months will find myriad cameras merrily consuming thousands of feet of precious Kodachrome. What sort of a vacation picture will yours be? You alone can answer that question, and the forethought that precedes your effort will be the most important factor in formulating that answer.

It is my belief that the filming of a successful vacation picture is one of the most difficult assignments that ever confronts the average amateur. With his vacation time rigidly budgeted, he is understandably reluctant to spend any major part of this limited time in shooting an elaborate script. And yet, to shoot without a plan is usually little short of a waste of film, not to mention the subsequent crimes we perpetrate on our patient friends who have to view (with polite forbearance) our "so what" vacation pictures.

Of course, if your pictures are for your personal record only, anything that satisfies you will suffice. However, if you wish your film to be something that may be viewed with pleasure by others, you will have to do some planning in advance. Don't let the word "Planning" frighten you. Briefly it means, "Know what you want to shoot." One would think that such an admonition would be unnecessary, but it is a sad fact that most of us shoot too many haphazard "pot shots," only to discover (when we start to edit our film) that through the lack of a preconceived plan, we neglected to get many important shorts that we find are needed to tie in our continuity or to highlight an episode or sequence.

The suggestions that follow can be applied to any type of picture, but are basic points that usually are overlooked in our personal pictures—vacation or otherwise.

1st. Your picture must arouse the personal interest of the viewer.

2nd. Your picture should incorporate some sort of opposing forces.

3rd. Your picture should have climaxes.

Let us evaluate point No. 1 (Personal Interest). Your film must be of such a nature that the viewer has a personal interest in seeing it. Not because he might happen to know you, but because the subject on the screen is something he *wants* to see. Here are three ways in which audience interest may be achieved,—By filming unusual subjects, by picturing the usual in an unusual manner or by the incorporation of a continuity idea. If your subject matter is unusual, let the audience know *why* it is unusual,—they'll want to know. Otherwise the subject will be as uninteresting as yesterday's hash. In filming the usual,—film it dramatically. Unusual angles, dramatic composition or lighting will always command attention. Not every subject is adaptable to a dramatic treatment, but when such an approach is possible, take full advantage of it. The commonplace then becomes the usual. If a continuity idea is used, it may be built around the adventures—or misadventures—of some person or persons. Audience interest is maintained through the use of the usual story devices. The story need not be involved or continuous, but may be just a series of interest-compelling situations interspersed through your picture. The elements that develops these situations may arise from—

Point No. 2. (Opposing Forces). Every picture should have some element of opposition which must be overcome. It is the basis of every story (there's always a villain), but the vacation (travel or scenic) picture can also incorporate elements of opposition. The battle to land the big fish, the hazards of the difficult climb up the steep cliff, the race to get the tent up before the storm breaks. Play them up! The audience is interested in seeing you overcome these obstacles. If a continuity idea is used in your picture, the "Hero" can be beset with obstacles calculated to create situations that will arouse and maintain audience interest.

Point No. 3 (Climaxes). Every successful picture must be highlighted by climaxes interspersed at timely intervals as a stimulant to audience interest—saving the major climax for the last sequence. Climaxes in scenic pictures are hard to achieve, and yet they are essential in maintaining interest. A picture may be breathtakingly beautiful from the standpoint of subject matter and photography and yet be disappointing to an audience. The reason being that an unvarying level of pictorial or photographic excellence has introduced no climaxes which, in turn, leads to a feeling of monotony. Pictorial or photographic excellence should never be "played down" in order to "build up" a climax at some particular point, but we should remember at all times that we need climaxes to "point up" audience interest. So be on the alert for subjects to highlight or dramatize as suggested in Point No. 1.

The object of every picture, either movie or still, is to tell a story. Movies are particularly adapted to story telling, but as your camera can't think, you'll have to furnish the brains. Learn to think in terms of continuity. When you shoot a scene, does it suggest a previous or subsequent action or situation? If it does, shoot it. Then you have a sequence that "says something" instead of a pot shot related to nothing, and telling less. Train yourself to recognize the story potential of every scene or situation.

This year "bring back" a vacation that your friends will wish they had gone on. Here's hoping that you have a swell time, and good shootin' to you.

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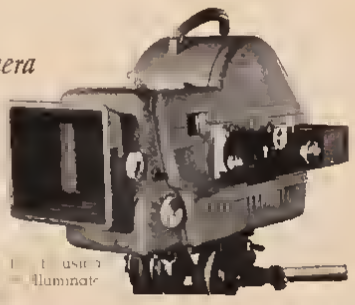

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Academy Awards

(Continued from Page 134)

This new method for the quantitative determination of hydroquinone and metol is an important improvement in the procedure of one of the basic controls in laboratory processing. By permitting the determination of hydroquinone and metol in the same extract and at only one pH, the method, compared to past procedures, offers a more rapid means of analysis with increased accuracy and safety in that it greatly reduces the fire and explosion hazard.

To Herbert E. Britt for the development and application of formulas and equipment for producing cloud and smoke effects.

The Britt formulas and equipment provide a simple effective method of producing cloud, fog, smoke and steam effects. The density of the vapor resulting from the mixture of the formulas is controllable from transparent to opaque, and the buoyancy is controllable to that the vapor will rise like smoke, float like clouds, or settle like fog. Thus, it allows for very realistic effects in the production of motion pictures and in a manner that is neither unpleasant to personnel nor harmful to equipment.

To Burton F. Miller and the Warner Brothers Electrical and Sound Departments for the design and construction of a motion picture arc lighting generator filter.

This equipment completely suppresses noise from arc lamps, thus removing a recording difficulty which has been encountered on motion picture sets since arc lamps have been used. By its use all combination and individual arc lamp chokes are eliminated, resulting in the saving of time on the set and the saving of labor in transporting, installing and maintaining individual chokes. Thus, it improves the quality and decreases the cost of producing motion pictures and so is important to the industry.

To Carl Faulkner of the 20th Century-Fox Sound Department for the reversed bias method, including a double bias method, for light valve and galvonometer density recording.

This method of bias applied to sound recording, increases the range and prevents distortion in the form of overload. It increases the volume range by reducing the noise level and by increasing the maximum undistorted signal level. The result is an increased dynamic volume range in the theatre, thus enhancing the dramatic value of the sound to the picture.

To the Mole-Richardson Company for the Type 450 Super High Intensity Carbon Arc Lamp.

This super high intensity lamp is important both photographically and economically. By providing a greater light intensity from a single beam it is possible to create brilliant highlights and deep shadows which heighten the dramatic effect on the screen. It delivers twice the light output of any previous unit and with greater efficiency.

To Arthur F. Blinn, Robert O. Cook, C. O. Slyfield and the Walt Disney Sound Department for the design and development of an audio finder and track viewer for checking and locating noise in sound tracks.

This equipment consists of a sound head to locate noise in sound tracks and a projection viewer, which projects and enlarges the track so that noise which is difficult to locate audibly can be accurately found visually. The use of this equipment results in a more rapid and accurate method of locating noise on tracks in preparation for re-recording.

To Marty Martin and Hal Adkins of the RKO-Radio Miniature Department for the design and construction of equipment providing visual bullet effects.

This new method, accomplished without the use of explosives, realistically produces the effect of glass being shattered or metal being struck by bullets without actual damage to the object. A capsule containing petroleum jelly (with the addition of black or aluminum powder) is fired by means of a compressed air gun electrically controlled. This equipment produces the desired effect in an extremely realistic manner, yet is simple, safe and economical in operation and accurately controllable, both in aiming and firing the capsules.

To Harold Nye and the Warner Brothers Electrical Department for the development of the electronically controlled fire and gaslight effect.

This equipment electronically controls the flicker and intensity of background and reinforcing lights. Gaslight and fireplace flames must be augmented with incandescent light for photographic purposes. Manual operation of flasher and dimmer combinations produce an artificial effect. This equipment automatically follows illumination of a flickering flame and controls exactly the flicker and intensity of reinforcing and background lights, resulting in a realism on the screen not previously obtainable.

To Burton F. Miller and the Warner Brothers Sound Department for the design and application of an equalizer to eliminate relative spectral energy distortion in electronic compressors.

The exaggeration of sibilant speech sounds produced by electronic volume compressors results in over emphasis of "s" sounds in theatre reproduction. Application of this equalizer accomplishes the practical elimination of this form of distortion resulting in improved sound quality in the theatre.

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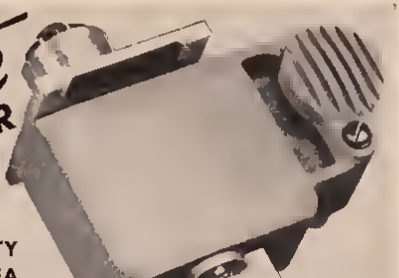

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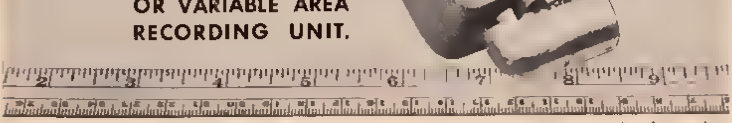

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Screen Makeup

(Continued from Page 127)

work has been the portraiture of Franklin Delano Roosevelt required for the picture, *The Beginning or the End*, which tells the human story behind the atomic bomb. In such cases Mr. Dawn prefers to work from life masks, or death masks, but because none was available he used the almost unlimited supply of available photographs and drawings to build the progressive changes that took place in Mr. Roosevelt's face from 1938 to the time of his last public appearance. Godfrey Tearle, the British actor who portrays the role, has many similar features but there were required some alterations in the brow formation and other details. For the same picture a comparative likeness of Einstein was required although here the portrait is "more impressionistic," with emphasis upon the unusual head formation and the halo of gray hair. For the many other living scientists and military men who are depicted in the picture no effort toward portraiture was attempted.

Conversation with Mr. Dawn always leads into illuminating discussion of his varied problems. For instance, our talk relative to make-up for *Green Dolphin Street* turned chiefly to an analysis of the Maori people of New Zealand. One Maori native was found in Hollywood, and Hawaiians similar in type will be cast for the important roles. "The people of the Pacific islands are a strange complex of many races," said Mr. Dawn as he launched into a fascinating discourse concerning their facial characteristics. As a former sculptor, he is vitally interested in the definitive structure of peoples and any new problem is accepted as a challenge to investigate all the fine points which go far beyond the immediate need. Back of his character portraiture lies a structural plan that is similar in accuracy to an architectural design.

The spontaneous play of light on face and form is a factor which must be given great consideration in all artistic screen make-up, and therefore conferences with the director of photography are a matter of course. In this twentieth century the "golden light and luminous shadows" of a Rembrandt are not confined to the great masters of the brush. They are achieved electrically by directing powerful beams of light from any desired source, with resulting deep shadows and highlights to accentuate the work done by the motion picture make-up artists in which portraiture is blended with setting and, in the final analysis, both must be subordinated to achieve a maximum of audience interest in the story.

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Biological Photo Exhibit

International exhibition of biological photography of interest to photographers in the scientific field will be held September 10 to 27, 1947, under sponsorship of the Biological Photographic Association, in Rochester, N. Y., during organization's annual convention.

The term, "biological," has been considered in its broadest sense; and all aspects of biology—zoology, genetics, osteology, paleontology, entymology, ornithology, ecology, and geology, as it pertains to living organisms, are subjects for exhibition. Scientific record photography is not to be ignored.

Exhibition Committee desires to include all photographic techniques in the preparation of black-and-white and color still and motion picture photographic material. Technical procedures desired are those of general photography, photomicrography (electron and visible light), radiography (except as applied in routine roentgenography), autoradiography, michroradiography, electron diffraction of animal or plant tissues, high speed photography, infrared, ultraviolet, polarized light records, etc.

Entry blanks for contributors to the Exhibition may be obtained from Lou Gibson, 343 State Street, Rochester 4, N. Y. Entries close on August 1st.

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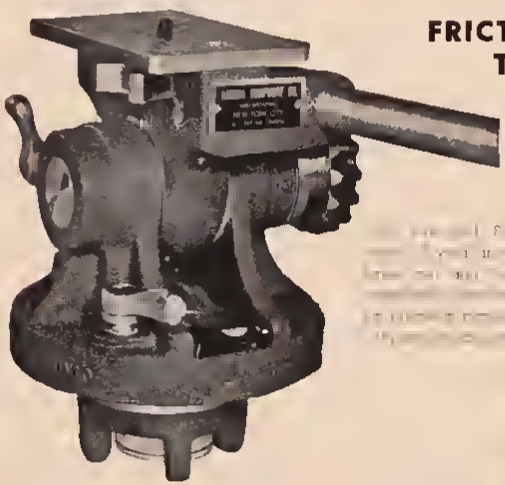

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Composition

(Continued from Page 129)

possible to photograph a scene which comprises only two colors, and those of the same value We may wish to use colors not only of different chroma strength, but of different value

Observe the diagram·

We are combining yellow of high

value and strong chroma with purple-blue, its complementary of weak chroma and low value.

To arrive at the proper determination of the area which should be applied to each color we resort to the simple procedure of multiplying the chroma by the value of each color Y 9/3=27, P B 3/2=6 Applying these products to the colors inversely will result in our grouping 6 units of area of the yellow hue against 27 units of area of the purple hue Roughly, the proportion is four and one-half to one.

The conclusion is that the stronger chroma and higher value should occupy the greater area Circumstances in photographing a motion picture, or designing the set for the scene will, of course, never permit strict adherence to this formula It will be of inestimable help, none the less, if the preceding theory is employed wherever possible

For purposes of illustration we have considered designing conditions of balance for only two colors. It is redundant to say that the same rules would apply for three or more colors.

The agreeable relationships which it is our desire to attain in color relations we now see as an orderly sequence of form and interval within our color sphere In actual practice we do not suggest that a mathematical exercise should be the forerunner of compositional inspiration Rather, that we keep in mind the sole fact that colors are related in a concrete and positive manner is the purpose of these pages We suggest that judgment be directed, that choice be governed

Recapitulation and Considerations

In the foregoing we have considered only a very few of the points in the laws governing the measurement of color and its various and sundry harmonies It would be futile to indulge in long discourse on more of them We have attempted to show that the range of color combinations and values is infinite. More than this, we have attempted to prove that a logical and orderly concept of color manipulation will lead to very worthwhile results, where random selection of tones and tone areas will cause avoidable irritation on the part of the viewer of our finished product

It is well that we consider some of the direct applications of the study of color to monochrome photography with the commonly used types of film

Heavy chroma for green and red are unusual When these occur in actual practice it is necessary to use considerable light to photograph at the desired value The eye is used to the lighter shades in everyday life

The elements, i.e., heat, light, weather, tend to a bleaching action, and heavy chroma is an artificial state in most cases. One of the notable exceptions is the color of foliage For this reason an unusual amount of light must be used on leaves, grass and other verdure to bring them up to pastel shades which cause a greater film exposure It is necessary at times actually to spray dark reds and greens with lighter pigments in order to gain the effect of high lights

Blues and violets, which are dark colors, usually have so much white added to bring them up to value for the eye, that the actinic value upon the film is much greater than would ordinarily be assumed For this reason, the light incident upon blues and violets should be subdued

Yellow is naturally a light color to the eye. Other colors of equal value appear darker to the eye To make yellow expose in monochrome photography to the proper intensity, more light must be added than appears natural.

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Aces of the Camera

(Continued from Page 123)

dleton roundup of 1925 to photograph the events completely with the Akeley. This extensive experience with the latter proved to be most valuable in later years when the regulation production cameras were adapted for fast follow and pan shots. With more than a year's Akeley experience, Will was assigned first camera duties on comedies and serials, and then came his first major trip outside of the United States.

The late Carl Laemmle, head of Universal, had been promoted by a lecturer on the idea of making a feature based on the life and customs of the Maoris of New Zealand. So the producer, serial director Lewis Collins, Will, and an assistant cameraman headed across the Pacific. Idea was that the producer would write the story and script enroute, but on arrival at Aukland, the story was not on paper. Weeks went by with costs mounting and no film shot.

Finally, Laemmle had his New Zealand sales manager check on the troupe's activities, and called a halt to further expenditure. But Collins and Will had toured the back country, and the former whipped up a wild and wooly meller along serial lines, which—with an all-native cast—he promised could be produced for less than $20,000, and he impressed the fact that such a picture would recoup the monies already expended which otherwise would be lost. Laemmle approved, and "The Devil's Pit" was made by the three adventurers from Hollywood, with an all-native cast of amateurs, and several Maoris aiding as production assistants. It was quite successful for type, especially in England and New Zealand. Returning to Hollywood eight months after departure—most of which time was wasted by the original producer—Will found that sound had blasted the Hollywood scene.

But Will, like all other cameramen of the period, jumped into the hot-boxed camera booths to photograph two reelers and features, including handling of one of the several camera units on "The King of Jazz." The latter, by the way, was made in the old two-color Technicolor process forerunner of the present method.

Will has functioned as Technicolor associate in Direction of Photography on "Adventures of Tom Sawyer," (with James Wong Howe, A. S. C.), "Captain of the Clouds," (with Sol Polito, A. S. C.), "Heart of the North," (with L. W. O'Connell, A. S. C.), "Aloma of the South Seas," and "Happy-Go-Lucky," (both with Karl Struss, A. S. C.). He also toured the United States in photographing a group of color shorts for Warners, most prominent being "A Ship Is Born," which received Academy Award nomination.

He had one of his longest picture engagements as Director of Photography of the second unit for Selznick's "Gone With the Wind," and contributed much of the exterior footage of that picture on various locations.

Shortly after the United States entered the war, Will received commission as captain in the Army Air Force First Motion Picture Unit. He photographed training and indoctrination pictures, including "Wings Up," which had Clark Gable featured. This was released in theatres generally. He requested overseas duties, and his first mission was responsibility for making a photographic brief for the Air Transport Command of the route from Edmunton, Canada, to Fairbanks, Anchorage, Nome and other points in Alaska. This visual project was required to brief pilots on account of the hazardous terrain they later had to travel over on the air supply line to Russia.

In June of 1943, Captain Cline took off for China in command of a photographic unit of 32 men—the 16th Combat Camera Unit which was attached to the 14th Air Force commanded by General Chennault. Captain Cline (who was promoted to Major by General Chennault in the field) and his men photographed all activities of the 14th AAF—and covered virtually all of China outside of areas under Jap control, both in the air and on the ground. His unit was delegated to make films in the China theatre for the American newsreel pool.

Assignments, many of which were solo missions by various members of his unit—including himself—comprised the recording of evacuations, bombing missions, building of airports, destruction of the latter in the path of the advancing Japs, and various strategic events of the 14th AAF. On orders, Major Cline returned to Washington the end of 1944 with 100,000 feet of film made in the China theatre for viewing by top Army and Air Force officials who were mapping the final drive against the Japs at the time. Some of this footage was edited into a five reel documentary, "China Crisis," which was planned for general theatrical release. But the Japs capitulated before the film could be readied for distribution. However, it was shown at the United Nations conference in San Francisco to create wide attention.

In the final months of the Pacific war, Major Cline was sent to the Philippines, Morotai, and Okinawa, in charge of an AAF photographic unit shooting air force activities in both 35 mm monopack and 16 mm kodachrome. Shortly after this assignment, he was released from service in early 1946 to return to the Technicolor camera staff.

But, despite his world travels previously, it seems Will could not get out of moving around. One of his first assignments was Technicolor Director of Photography with Sid Wagner, A. S. C., on "Fiesta," an M-G-M production which again took him to Mexico. Recently, he completed a tour of the eastern section of the United States photographing a travel feature for Wilding Pictures in Technicolor monopack.

In mentioning monopack, it might be well to point out that Will was associated with the earliest exhaustive tests conducted by Technicolor on this type of color film stock, which, he admits, gives him plenty of know-how in handling assignments calling for use of that color negative.

Practical experience is the major requisite in motion picture photography, Will observes. And he really has had that in his world travels with a camera. Such episodes, in locations far removed from the supplies and conveniences of Hollywood, naturally require inventiveness, resourcefulness, and an ability to cope with any and all unusual situations that continually arise.

Although the film expeditions to far countries are at best the toughest assignments for production cinematographers, Will has thrived on his many experiences on such journies. And—at the moment—he is standing by for another trip—it may be to Mexico, South America or the South Seas. But, he admits, the best thrill in travelling is the day you leave and the day you get home.

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Current Assignments of A. S. C. Members

As this issue of AMERICAN CINEMATOGRAPHER goes to press, members of the A S. C were engaged as Directors of Photography in the Hollywood studios as follows:

Columbia

Burnett Guffey, "Assigned to Treasury," with Dick Powell, Signe Hasso, Mayhia, Ludwig Donath, Vladimir Sokoloff

Charles Lawton, Jr., "Her Husband's Affairs," with Lucille Ball, Franchot Tone, Edward Everett Horton, Mikhail Rasumny, Gene Lockhart

William Snyder, "The Man From Colorado," (Technicolor) with Glenn Ford, William Holden, Ellen Drew, Edgar Buchanan, Ray Collins

Henry Freulich, "Keeper of the Bees," with Harry Davenport, Jane Darwell, Gloria Henry, Jo Ann Marlowe

Eagle-Lion

Jackson Rose, "Out of the Blue," with George Brent, Virginia Mayo, Carole Landis, Turhan Bey, Ann Dvorak

Tony Gaudio, "Love From a Stranger," with John Hodiak, Sylvia Sidney, Ann Richards, Isobel Elsom, Ernest Cossart.

Metro-Goldwyn-Mayer

Hal Rosson, "The Hucksters," with Clark Gable, Deborah Kerr, Sydney Greenstreet, Keenan Wynn, Ava Gardner, Adolphe Menjou, Edward Arnold

Charles Rosher, "Song of the Thin Man," with William Powell, Myrna Loy, Keenan Wynn, Jayne Meadows, Leon Ames

Harry Stradling, "The Pirate," (Technicolor) with Judy Garland, Gene Kelly, Walter Slezak, Gladys Cooper

Charles Schoenbaum, "Good News," (Technicolor) with June Allyson, Peter Lawford, Joan McCracken, Pat Marshall, Ray McDonald, Mel Torme.

Monogram

Paul Ivano, "The Gangster," (King Bros. Allied Artists) with Barry Sullivan, Belita, Joan Lorring, Akim Tamiroff, Fifi D'Orsay.

William A Sickner, "Louisiana," with Jimmie Davis, Margaret Lindsay, John Gallaudet

Mack Stengler, "Sarge Goes to College," with Alan Hale, Jr., Freddie Stewart, June Preisser, Frankie Darro

Harry Neumann, "The Law Comes to Gunsight," with Johnny Mack Brown, Raymond Hatton, Reno Blair

Marcel LePicard, "Scareheads," with Leo Gorcey, Huntz Hall, Christine McIntyre, Bobby Jordan, Gabriel Dell, David Gorcey.

Paramount

Fred Jackman, Jr., "Albuquerque," (Cinecolor) (Clarion Prod.) with Randolph Scott, Barbara Britton, George (Gabby) Hayes, Russel Hayden, Lon Chaney

John Seitz, "The Big Clock," with Ray Milland, Charles Laughton, Maureen O'Sullivan, Rita Johnson, Elsa Lanchester, George Macready, Lloyd Corrigan.

RKO

Frank Redman, "If You Knew Susie," with Eddie Cantor, Joan Davis, Allyn Joslyn, Sheldon Leonard, Douglas Fowley, Sig Ruman, Fritz Feld, Paul Harvey

Robert de Grasse "Indian Summer," with Alexander Knox, Ann Sothern, George Tobias, Myrna Dell, Florence Rates, Shalyn Moffett

Harry Wild and W Howard Greene, "Tycoon," (Technicolor) with John Wayne, Laraine Day, Sir Cedric Hardwicke, Anthony Quinn, James Gleason, Judith Anderson.

Gregg Toland, "The Bishop's Wife," (Samuel Goldwyn Prod.) with Cary Grant, Loretta Young, David Niven, Monte Wooley, Marsha Ann Northrop, Edit Angold, Sara Haden

J Roy Hunt, "Crossfire," with Robert Young, Robert Mitchum, Robert Ryan, Gloria Grahame, Jacqueline White, Steve Brodie.

Screen Guild

William Sickner, "Killer Dill," with Anne Gwynne, Frank Albertson, Stuart Erwin, Mike Mazurki, Milburn Stone, Dorothy Granger

Jack Greenhaigh, 'Western Barn Dance," with Ernest Tubb, Lori Irving, Helen Boyce, Frank McGlynn.

James Brown, Jr., "The Hat Box Mystery," with Tom Neal, Allen Jenkins, Pamela Blake, Virginia Sale

Selznick

Lee Garmes, "The Paradine Case," with Gregory Peck, Ann Todd, Charles Laughton, Charles Coburn, Ethel Barrymore, Louis Jordan, Joan Tetzel, Leo G Carroll, Valli

Joe August, "Portrait of Jennie," with Jennifer Jones, Joseph Cotten, Cecil Kellaway.

Twentieth Century-Fox

Charles Clarke, Arthur Arling, "Captain From Castile," (Technicolor) with Tyrone Power, Jean Peters, Cesar Romero, Lee J. Cobb, John Sutton, Antonio Moreno, Thomas Gomez, Alan Mowbry

Ernest Palmer, "Scudda Hoo, Scudda Hay," (Technicolor) with June Haver, Lon McCallister, Anne Revere, Walter Brennan, Henry Hull, Robert Karnes

Norbert Brodine, "Kiss of Death," with Victor Mature, Brian Donlevy, Patricia Morison, Coleen Gray, Wendell Phillips, Anthony Ross, Henry Brandon.

Benjamin Kline, "Second Chance," (Sol Wurtzel Prod.) with Kent Taylor, Louise Currie, Dennis Hoey, Larry Blake, Ann Doran, Betty Compson

United Artists

Franz Planer, "Vendetta," (California Pictures) with Faith Domergue, George Dolenz, Hillary Brooke, Nigel Bruce

James Wong Howe, "Body and Soul," (Enterprise) with John Garfield, Lilli Palmer, Hazel Brooks, Anne Revere, William Conrad, Canada Lee

Karl Struss, "Atlantis," (Nero Films) with Maria Montez, Jean Pierre Aumont, Dennis O'Keefe, Alexis Minotis, Milada Mladova, Russ Conklin

Universal-International

Stanley Cortez, "Secret Beyond the Door," (Diana Prod.) with Joan Bennett, Michael Redgrave, Anne Revere, Barbara O'Neill, Natalie Schaefer, Rosa Rey

William Daniels, "Brute Force," (Mark Hellinger Prod.) with Burt Lancaster, Hume Cronyn, Charles Bickford, Ann Blyth, Anita Colby, Yvonne De Carlo, Ella Raines

Milton Krasner, "For the Love of Mary," with Deanna Durbin, John Dall, Donald O'Connor, Charles Winninger, Helena Carter, Margaret Wycherly

Hal Mohr, "The Lost Love," (Walter Wanger Prod.) with Robert Cummings, Susan Hayward, Agnes Moorehead, Joan Lorring, Frank Puglia

Warners

Woody Bredell, "The Unsuspected," (Michael Curtiz Prod.) with Joan Caulfield, Claude Rains, Audrey Totter, Constance Bennett, Michael North, Hurd Hatfield.

Karl Freund, "Wallflower," with Joyce Reynolds, Robert Hutton, Janis Paige, Edward Arnold

Sol Polito, "Voice of the Turtle," with Eleanor Parker, Ronald Reagan, Eve Arden

Arthur Edeson, William V. Skall, "Two Guys From Texas," (Technicolor) with Dennis Morgan, Jack Carson, Dorothy Malone, Andrew Tombes, Forrest Tucker.

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Cameraman's Director

(Continued from Page 125)

contribute strongly to the action He does not like obvious tricks, and his method of working is to select desirable elements of suspense in the form of strong basic situations and then build the story around them

Harmony Behind the Viewfinder

Perhaps the main reason that Hitchcock works so harmoniously with Directors of Cinematography is that he is able to talk their language He thinks in terms of the camera and visualizes every phase of a story as it will appear on the screen So well does he know his camera, and so fully does he respect the cameraman that he never has to look at the daily rushes to know what is on the film

During his eight years in Hollywood, he has worked smoothly with many of the industry's top cinematographers, He filmed "Mr and Mrs. Smith" and "Suspicion" with Harry Stradling, A S C, at the camera, "Lifeboat" with Glen MacWilliams, A S C , "Saboteur" and "Shadow of a Doubt" with Joseph Valentine, A S C., "Foreign Correspondent" with Rudolph Mate, A.S C , 'Rebecca" and "Spellbound" with George Barnes, A.S C ; and "Notorious" with Ted Tetzlaff, A S C

In all of these films, the camera styles reflected the varied personalities of the individual cinematographers, and yet, they all had a certain kinetic approach that is definitely the Hitchcock "touch."

Lee Garmes, A S C , currently at work with Hitchcock filming "The Paradise Case" for David O Selznick, sums up the reasons why Hitch is so highly respected by cameramen and other technicians "It is stimulating to work with Hitch because he recognizes and respects the cinematographer as a creative personality, and gives him free rein to use talent and imagination in putting the story on film," Garmes explains, "He doesn't try to do the assistant director's job or the cameraman's job He directs the action, but he recognizes that making a picture takes the teamwork of the whole crew."

During his sojourn in Hollywood, Alfred Hitchcock has achieved a dual success in that, not only are his pictures *artistically* good, but they ring up a merry tune at the box-office, as well—a happy combination no matter how you view it.

Such success is based upon an imaginative approach to story development, a comprehensive technical background, an uncanny sense of dramatic timing, and the ability to think in terms of camera and lens You may add to these a flair for working quietly and smoothly in such a way as to inspire the best from his fellow technicians — for it is this quality more than anything else that has won him the respectful tag of "cameraman's director"

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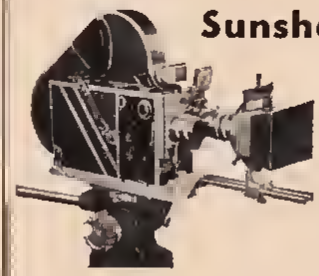

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BOOK REVIEW

"Photography by Infrared"

by Walter Clark, Second Edition

(Published by John Wyley & Sons, Inc., New York, Chapman and Hall, Ltd., London)

Nothing, in my opinion, has contributed so much to the development of photography as infrared It has opened new doors for science, medicine, color, art, crime discovery, diseases of the body, astronomy, haze—distance in air—and camouflage of war, and untold avenues too numerous to mention

Panchromatic emulsions were a great step from the old orthochromatic films, but infrared has reached far beyond what visual light or the eye can see After reading the marvelous book on "PHOTOGRAPHY BY INFRARED" by Walter Clark (dedicated to Dr E K. Mees, F R S), I am more than enthused over infrared and its possibilities and feel no photographer should be without the book

This book—clearly describing light, heat and radiation known as infrared—treats on all the phases of infrared photography from the sensitizing, construction of lights and lamps, lenses and filters, to the finished product, is printed in fourteen chapters on 472 pages of tough slick paper and in a convenient size, 5½x8½ inches It is generously illustrated and also contains many understandable graphs and lists of very good reference books

Because of the knowledge to be gained from this book I am sure that my shelf of books on photography would be incomplete without it

Glenn R Kershner

Nashville Schools Acquire 21 More 16mm. Projectors

Twenty one new Victor sound motion picture projectors were added to the audio-visual department of the Nashville, Tennessee, city schools recently in a step designed to enrich the curriculum in all fields of study through increased use of visual aids materials The purchase of the new 16 mm equipment by the Nashville city board of education was announced by John Forte, Sales Manager for the Nashville Audio-Visual Equipment Company, local distributors for Victor projection equipment

The acquisition of the new machines brings to 44 the number of sound projectors now in use in the Nashville City schools Each school in the system has an audio-visual chairman who supervises the projection equipment and orders all films from a central film library maintained by the city schools

For the present school year, a budget of $15,000 has been set up for the audio visual department About $6500 of that amount will be spent in the purchase of films, records, slides and filmstrips

Milwaukee Amateur

Norville Schield was elected president of the Amateur Movie Society of Milwaukee for the coming year, taking office at the February 12th meeting, held at the Red Arrow Club Other officers include: Richard Franzel and Mrs. DeLylia Mortag, vice presidents; Fred Dominose, treasurer, and Naomi Gauger, secretary As Milwaukee is one of the many clubs holding two meetings monthly, the board of directors voted to have business taken up at the initial session only

Films exhibited at the February 12th meeting included: "Holland Blooms Again," "Music in the Sky," and "Fashions for Americans," all soundfilms

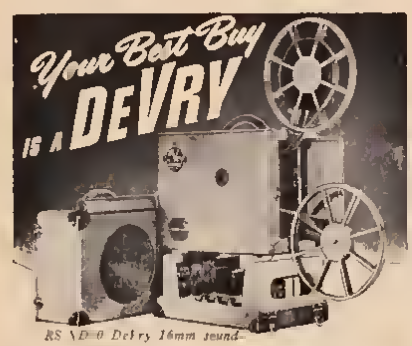
Feature Production Resumes at RKO-Pathe N. Y.

Feature production resumed at RKO Pathe Studios, New York City, several weeks ago, when David Selznick dispatched his "Portrait of Jenny" unit starring Jennifer Jones and Joseph Cotten from Hollywood under the guidance of director William Dieterle to make all interiors on the eastern studio sound stages Joseph August, ASC, will function as director of photography on the production.

Willard Van Enger Passes

Willard Van Enger, process cameraman for Warners studios for the past 20 years and for many years a member of the A S C, died February 22nd following an illness of several months Funeral services and interment were held at Forest Lawn, February 25th He is survived by his widow, two sons, and a brother

The 3-Purpose Projector



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ORIGINATORS & IMPROVERS OF PORTABLE MOTION PICTURE EQUIPMENT... SINCE 1913

Cinema Workshop

(Continued from Page 140)

the film Since rates are usually computed on a per-hour basis for actual recording time, it pays to rehearse the narration quite thoroughly in advance so that the recording session will not be drawn out to overly expensive lengths

The Scope of Narrated Sound

In working with narrated sound, even though the dialogue of the characters is not heard directly, their thoughts, words and actions can be interpreted so skillfully through the use of clever commentary that an *illusion* of direct dialogue results

An especially effective adaptation of this technique, borrowed from radio and often used with striking effect in professional photoplays, is the *stream of consciousness approach* This is a style in which the main character in the film narrates the commentary in the *first person*, revealing his personal thoughts and ideas regarding the action as the story progresses It is tremendously effective in lending a strong personal touch to the presentation of the story, and permits the expression of dramatic subtleties that would be impossible to put across in any other way

In staging the action for a film that is to utilize *narrated* rather than *direct* sound, it is necessary to have in mind a general idea of how the narration is to run, in order to accurately key the pace of the action during filming However, the actual timing and editing of the commentary cannot accurately be done until the visual footage has been cut and arranged in approved sequence

Often, when action must be synchronized closely to narration, the commentary is first written and approved, and is then read aloud on the set at the same speed that will be used in recording, so that the action can be timed to fit precisely To insure perfect matching, the narration is sometimes recorded first (either on film or disc) and played back on the set while the action is being filmed

Background music can add forcefully to the effectiveness of a film, and should be directly keyed to the mood the picture is supposed to convey You can often patch together a very acceptable score by using parts of commercial disc recordings, although permission for such use must first be obtained from the disc manufacturer.

The ideal arrangement, of course, is to compose an *original* score, or create one from music in public domain Such a score, played by a small orchestra, a piano, or the versatile Hammond organ (and skillfully keyed to the action) will give the picture a professional finish and add hugely to its effectiveness as entertainment

Having established a background for the use of sound with film, we can now go on to other phases of production, returning to the subject of sound in a later chapter for a detailed analysis of the mechanical techniques of recording

NEXT ISSUE *Pictorial Continuity*

Television Use of 8-16 mm. Features SMPE Convention

Latest developments in the utilization of both 8 mm and 16 mm motion pictures for television will highlight the 61st semi-annual convention of the Society of Motion Picture Engineers which will be held at the Drake Hotel, Chicago, April 21st to 25th

Major emphasis of the program of papers to be presented will be placed on application of narrow films for television and other fields, together with all phases of studio and stage techniques applicable to both the sub-guage films and television, according to announcement by SMPE president Loren Ryder.

Technical sessions and other activities of the convention will be open to all amateur and professional 8 mm and 16 mm film makers. It is pointed out, and the central midwest location of the convention will undoubtedly attract many enthusiasts from the amateur ranks.

Academic Film Co. Resumes

Milton J Salzburg and Harold Bammstone, for past 12 years president and vice president, respectively of Pictorial Films, Inc, have severed connections with the latter company to reactivate their own organization, Academic Films which suspended activities during the war Plans provide for an enlarged program by Academic in all phases of 16mm production, specializing in educational films

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Syracuse Cinematographers

What happened in Syracuse?

A postcard dated March 1st, and signed by Dorothy Warner, Secretary, states

"This is to advise that the Syracuse Movie Makers Association has been disbanded as of Jan. 1, 1947 and a new club formed under the name of the Cinematographers Club of Syracuse, 153 Lilac Street, Syracuse, N. Y.

"All properties of the old club have been sold at auction. Kindly address future literature to the above new name."

Lummus Camera

Movie group of Lummus Camera Club, New York met on March 27th for general round-robin discussion of camera operation and technique. Films exhibited included several produced by members, and one subject from the library of ACL.

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